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**United States Patent** [19]  
**Chiu et al.**

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[54] **MESH STRUCTURE TO AVOID THERMAL GREASE PUMP-OUT IN INTEGRATED CIRCUIT HEAT SINK ATTACHMENTS**

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[58] **Field of Search** 257/714, 719, 257/720, 746, 747, 741, 782, 783; 438/118, 119, 122

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[57] **ABSTRACT**

An embodiment of the invention includes an integrated circuit package having a substrate, an integrated circuit mounted to the substrate, a thermal element, and a heat pipe disposed between the integrated circuit and the thermal element. The heat pipe includes a retaining structure impregnated with a thermal grease. The heat pipe is a result of a process that includes the step of impregnating the retaining structure with a thermal grease prior to disposing the heat pipe between the integrated circuit and the thermal element.

**11 Claims, 1 Drawing Sheet**

